

**ABSTRACT**

**[0038]** A temperature sensor assembly and method for use in a water heater. The temperature sensor assembly includes a sensor disposed within a non-planar base that at least partially defines a volume, a collector coupled to the base, and a reflector coupled to the base such that the sensor and the reflector are not in thermal contact. The reflector comprises a highly reflective material such that heat from the tank of the water heater is focused on the sensor, thereby increasing the accuracy of the temperature readings of the sensor.